

## STN Columbus

09/936, 747

5/17/04

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

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 and searchable  
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 available  
 NEWS 14 APR 26 LITAlert now available on STN  
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 NEWS 17 May 19 PROUSDDR: One FREE connect hour, per account, in both May  
 and June 2004  
 NEWS 18 May 12 EXTEND option available in structure searching  
 NEWS 19 May 12 Polymer links for the POLYLINK command completed in REGISTRY  
 NEWS 20 May 17 FRFULL now available on STN  
  
 NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT  
 MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
 AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004  
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FILE 'USPAT2' ENTERED AT 16:27:57 ON 17 MAY 2004  
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=> s (glucan or betaglucan) and (soluble or watersoluble)  
17 FILES SEARCHED...

L1 10516 (GLUCAN OR BETAGLUCAN) AND (SOLUBLE OR WATERSOLUBLE)

=> s l1 and (#####particle or #####particulate or #####particular or powder or nanoscalar or nano  
LEFT TRUNCATION IGNORED FOR '#####PARTICLE' FOR FILE 'ADISCTI'  
LEFT TRUNCATION IGNORED FOR '#####PARTICULATE' FOR FILE 'ADISCTI'

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glycols, especially ethylene glycol and/or propylene glycol or oligomers thereof, with higher fatty acids, such as palmitic acid, stearic acid, and behenic acid, monoesters or polyesters of. . . carboxylic acids, fatty acids and their metal salts, ketosulfones or mixtures of said compounds. Particular preference is given to ethylene glycol distearates and/or polyethylene glycol distearates having on average 3 glycol units.

SUMM [0149] Particularly suitable thickeners and dispersants are ethylene glycol esters of fatty acids having 14 to 22, more preferably 16 to 22, carbon atoms, especially mono- and di-ethylene glycol stearate. Likewise of preferred suitability are stearic monoethanolamide, stearic diethanolamide, stearic isopropanolamide, stearic monoethanolamide stearate, stearyl stearate, cetyl palmitate, glyceryl. . .

DETD . . . 2.5%

Copolymer 66		0.4%
Glycereth-26		4.0%
Silica		1.0%
Di-C12-C13-alkyl malates	11.0%	
Iron oxides		1.25%
Titanium oxide		5.0%
Neopentyl glycol diheptanoate		3.0%
Diethylene glycol dioctanoate/diisononanoate		3.5%
Tridecyl neopentanoate		2.0%
Tocopherol acetate		0.2%
Myristyl lactate		2.0%
Cyclomethicone dimethiconol		1.0%
Porphyridium cruentum extract		5.0%

Perfume. . .

DETD [0158] The oil phase is heated to 80° C., the pigments are added in glycereth-25 or PEG 8. The water, too, is heated to 80° C., AMPS copolymer is added, and the two phases are emulsified at. . .

DETD [0159]

PEG-8 or glycereth-25		4.0
Copolymer 41		0.4
Iron oxides		1.25
Titanium oxide		5.0
Tocopherol acetate		0.2
C12-C13-Alkyl octanoate		18.0
Octyl methoxycinnamate. . .		

DETD [0161] The oil phase is heated to 80° C., the pigments are added in glycereth-25 or PEG 8. The water, too, is heated to 80° C., polyquaternium is added, and the two phases are emulsified at 8. . .

CLM What is claimed is:

. . . 14. A composition as claimed in at least one of claims 1 to 13, which is a makeup, foundation, face powder, rouge, mascara, eyeshadow, eyeliner, lipstick, cream, hair colorant, sunscreen, nail lacquer or colored gel.

=> s (glucan or betaglucan) (s) ((soluble (n) water) or watersoluble)

L14 1778 (GLUCAN OR BETAGLUCAN) (S) ((SOLUBLE (N) WATER) OR WATERSOLUBLE)

=> s l14 and (particle or particulate or nanoparticle or nanoparticulate or nanoparticular or po  
29 FILES SEARCHED...

L15 370 L14 AND (PARTICLE OR PARTICULATE OR NANOPARTICLE OR NANOPARTICU  
LATE OR NANOPARTICULAR OR POWDER OR NANOSCALAR OR NANO#####  
##### OR NM)

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```
=> s l15 and (colloid### or pva or polyvinyl or glycol or peg)
L16      175 L15 AND (COLLOID### OR PVA OR POLYVINYL OR GLYCOL OR PEG)

=> s l15 and (colloid### or pva or polyvinyl or polyethylene glycol or polypropylene glycol)
L17      157 L15 AND (COLLOID### OR PVA OR POLYVINYL OR POLYETHYLENE GLYCOL
          OR POLYPROPYLENE GLYCOL)

=> dup rem l17
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,
IMSPRODUCT, KOSMET, MEDICONF, NUTRACEUT, PCTGEN, PHARMAML'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L17
L18      142 DUP REM L17 (15 DUPLICATES REMOVED)

=> d l18 kwic

L18 ANSWER 1 OF 142 USPATFULL on STN
SUMM [0062] perfluorooctylpropanolyl polypropylene glycol ether methacrylate.
SUMM . . . 10 g Genapol T-250-acrylate, 1
      5 g N-methyl-4-vinylpyridinium chloride,
      2.5 g Silvet Y-12867, 2.5 g
      perfluorohexylpolyethylene glycol methacrylate,
      10 g polyethylene glycol dimethacrylate,
      4 g poly[N-vinylcaprolactam]
61    10 g AMPS, 20 g acrylamide, 30 g 3
      N-2-vinylpyrrolidone, 20 g Silvet 7608,
      10 g. . .
SUMM [0139] Suitable film formers, depending on the intended application,
      include salts of phenylbenzimidazolesulfonic acid, water-soluble
      polyurethanes, for example, C10-polycarbamyl, polyglycerol esters,
      polyvinyl alcohol, polyvinylpyrrolidone, copolymers thereof, for
      example vinylpyrrolidone/vinyl acetate copolymer, water-soluble
      acrylic acid polymers/copolymers and their esters or salts, examples
      being partial ester copolymers of acrylic/methacrylic acid and
      polyethylene glycol ethers of fatty alcohols, such as
      acrylate/stearate-20 methacrylate copolymer, water-soluble
      cellulose, examples being hydroxymethylcellulose, hydroxyethylcellulose,
      hydroxypropylcellulose, water-soluble quaterniums, polyquaterniums,
      carboxyvinyl polymers, such as carbomers and their salts,
      polysaccharides, polydextrose for example, and glucan.
SUMM . . . acids and their metal salts, ketosulfones or mixtures of said
      compounds. Particular preference is given to ethylene glycol distearates
      and/or polyethylene glycol distearates having on average 3 glycol units.
CLM   What is claimed is:
      . . . 14. A composition as claimed in at least one of claims 1 to 13, which
      is a makeup, foundation, face powder, rouge, mascara, eyeshadow,
      eyeliner, lipstick, cream, hair colorant, sunscreen, nail lacquer or
      colored gel.

=> s l14 (s) (particle or particulate or nanoparticle or nanoparticulate or nanoparticular or p
17 FILES SEARCHED...
L19      87 L14 (S) (PARTICLE OR PARTICULATE OR NANOPARTICLE OR NANOPARTICU
          LATE OR NANOPARTICULAR OR POWDER OR NANOSCALAR OR NANO#####
          ##### OR NM)

=> l19 and (colloid### or pva or polyvinyl or polyethylene glycol or polypropylene glycol)
L19 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
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=> s l19 and (colloid### or pva or polyvinyl or polyethylene glycol or polypropylene glycol)  
L20 21 L19 AND (COLLOID### OR PVA OR POLYVINYL OR POLYETHYLENE GLYCOL  
OR POLYPROPYLENE GLYCOL)

=> dup rem l20

DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,  
IMSPRODUCT, KOSMET, MEDICONF, NUTRACEUT, PCTGEN, PHARMAML'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

PROCESSING COMPLETED FOR L20

L21 19 DUP REM L20 (2 DUPLICATES REMOVED)

=> d l21 ibib ab kwic 1-19

L21 ANSWER 1 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 2000:7050 USPATFULL

TITLE: High efficiency skin protection formulation with  
sunscreen agents and antioxidants

INVENTOR(S): Siddiqui, Mukhtar, San Ramon, CA, United States  
Roberts, Richard L., Germantown, TN, United States  
Greene, James A., Sunnyvale, CA, United States

PATENT ASSIGNEE(S): Shaklee Corporation, San Francisco, CA, United States  
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6015548		20000118
APPLICATION INFO.:	US 1998-113815		19980710 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Dodson, Shelley A.		
ASSISTANT EXAMINER:	Lamm, Marina		
LEGAL REPRESENTATIVE:	Klarquist Sparkman Campbell Leigh Whinston, LLP		
NUMBER OF CLAIMS:	23		
EXEMPLARY CLAIM:	1		
LINE COUNT:	994		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A synergistic combination of one or more antioxidants and sunscreen agents provides superior protection of the skin against the harmful effects of ultraviolet radiation. In particular embodiments, the antioxidants include lipid soluble vitamins and water soluble antioxidants in an emulsification system, such as a polyorganosiloxane emulsifier. The lipid soluble vitamin component includes Vitamins A and E, while the water soluble antioxidant component includes magnesium ascorbyl phosphate, DL panthenol, beta glucan, grape seed extract and superoxide dismutase. The sunscreen agents may include a UVA sunscreen agent selected from the group of oxybenzone, dioxybenzone, sulisobenzene, avobenzene or zinc oxide, and at least one UVB sunscreen agent, selected from the group of ethylhexyl methoxycinnamate, DEA methoxycinnamate, padimate O, ethylhexyl salicylate, homosalate, TEA salicylate, octocrylene or titanium dioxide. The antioxidants and sunscreen agents in combination provide enhanced protection from ultraviolet radiation induced skin damage.

SUMM . . . copolymer commercially available from Chevron Chemicals Co. under the tradename PA-18 polyanhydride resin. Others include PVP/Eicosene Copolymer, PVP/Hexadecene Copolymer, and PVA/VA Copolymer, all available from GAF of Wayne, N.J.

CLM What is claimed is:

. . . composition, comprising about 0.0002-4% of a lipid soluble component that includes Vitamin A and Vitamin E; about 0.004-5% of a water soluble component that includes Vitamin C, beta-glucan, grape seed

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extract, and superoxide dismutase; an emulsifier; and a sunscreen component that contains less than about 12% of a non-particulate sunscreen agent that is substantially free of metal oxides.

. . . mixture comprises about 0.0002-4% of the lipid soluble antioxidants that include Vitamin A and Vitamin E; about 0.004-5% of the **water soluble** antioxidants that include Vitamin C, **beta-glucan**, grape seed extract, and superoxide dismutase; and the sunscreen agent containing less than about 12% of a non-particulate sunscreen agent that is substantially free of metal oxides.

L21 ANSWER 2 OF 19 USPATFULL on STN

### Full Text

ACCESSION NUMBER: 1999:84982 USPATFULL  
 TITLE: Methods for controlling environmental odors on the body using compositions comprising uncomplexed cyclodextrins  
 INVENTOR(S): Lucas, Juliet Marie, Cincinnati, OH, United States  
 Trinh, Toan, Maineville, OH, United States  
 Dodd, Michael Thomas, Edgewood, KY, United States  
 Bartolo, Robert Gregory, Cincinnati, OH, United States  
 PATENT ASSIGNEE(S): The Procter Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
	-----	-----	-----
PATENT INFORMATION:	US 5928631		19990727
APPLICATION INFO.:	US 1997-871854		19970609 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Nutter, Nathan M.		
LEGAL REPRESENTATIVE:	Stone, Kirsten K., Hentz, Mary Catherine, Mohl, Douglas C.		
NUMBER OF CLAIMS:	16		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1325		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention encompasses a method of controlling environmental malodors on the body comprising the application to the skin of a composition comprising from about 0.1% to about 5%, by weight of the composition, of solubilized, water-soluble, uncomplexed cyclodextrin; from about 0.1% to about 36%, by weight of the composition, of an oil phase selected from the group consisting of emollients, moisturizers, and skin protectants; one or more surfactants each having a hydrophilic/lipophilic balance of about 8 to 18 and wherein each surfactant, when combined with an aqueous cyclodextrin solution, provides no less than 25% of odor capture as an aqueous cyclodextrin solution; and an aqueous carrier. The compositions can be applied directly as a spray, poured from a bottle and applied by hand, or applied via a wipe.

SUMM . . . Petroleum wax

Aloe vera gel, decolorized  
     Hydrolyzed placental protein  
         Pistachio nut oil

Aloe vera gel, food grade  
     Hydrolyzed serum protein  
         Placental protein, **water soluble**

Aloe vera gel freeze-dried **powder**  
     Hydrolyzed silk Plankton extract

Amnoitic fluid Hydrolyzed wheat protein  
                     Polyamino sugar condensate

Arginine PCA Inositol Polybutene

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Atelocollagen	Isostearyl hydrolyzed animal protein	
		Polyglyceryl methacrylate
Avocado. . . oil	Super oxide dismutase	
Elastin amino acids		
	Molybdenum aspartate	
		Super oxide dismutase liposome1
Ethyl minkate	Neopentyl glycol dicaprato	
		Tissue extract
Ethyl panthenol	Oat $\beta$ -glucan	
		Tocopheryl acetate
Evening primrose		
	Ophiopogon japonicus extract	
		Tocopheryl linoleate
Glycereth-12	Orange wax	Tomato extract (Solanum lycopersicum L.)
Glycosaminoglycans		
	Palmetto extract	
		Trimethylglycine
Glycosphingolipids		
	Pantethine	Yogurt. . .
SUMM		. . . 2

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Acetylated glycol stearate		
	C14-15 alcohols	Coconut oil
Acetylated hydrogenated lanolin		
	Camellia oil, (Camellia japonica)	
		Coco rapeseedate
Acetylated hydrogenated lard glyceride		
	Canola oil	Colloidal oatmeal
Acetylated hydrogenated vegetable		
	Caprylic-capric-linoleic triglyceride	
		Corn oil
glyceride		
Acetylated lanolin		
	Caprylic-capric-stearic triglyceride	
		Cottonseed oil
Acetylated lanolin alcohol		
	Caprylic-capric-succinic triglyceride	
		Cuttlefish extract
Acetylated lard glyceride		
. . . butter, ethoxylated		
Poloxamer 182 dibenzoate		
	PPG-12-buteth-16	Sitostearyl acetate
Polybutene	PPG 12-PEG-50	lanolin
		Skin lipids
Polydecene	PPG-12 PEG-65	lanolin oil
		Sodium C8-16 isoalkylsuccinyl
		lactoglobulin sulfonate
Polyethylene glycol		
	PPG-12/SMDI copolymer	
		Sodium glyceryl oleate phosphate
Polyglycerol-10	tetra oleate	
	PPG-14 butyl ether	
		Sodium hyaluronate
Polyglyceryl-2	diisostearate	
	PPG-15 butyl ether	
		Sodium polymethacrylate
Polyglyceryl-2	tetraisostearate	
. . .		

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ACCESSION NUMBER: 1998:81280 USPATFULL  
 TITLE: Smoking article  
 INVENTOR(S): Saito, Yutaka, Yokohama, Japan  
 Anzai, Yuriko, Yokohama, Japan  
 Suzuki, Ryuichi, Yokohama, Japan  
 Ichinose, Hiroshi, Yokohama, Japan  
 PATENT ASSIGNEE(S): Japan Tobacco Inc., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5778899		19980714
	WO 9520330		19950803
APPLICATION INFO.:	US 1995-530105		19950926 (8)
	WO 1995-JP91		19950126
			19950926 PCT 371 date
			19950926 PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1994-7066	19940126
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Millin, V.	
ASSISTANT EXAMINER:	Deane, Jr., William J.	
LEGAL REPRESENTATIVE:	Birch, Stewart, Kolasch Birch, LLP	
NUMBER OF CLAIMS:	25	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 1 Drawing Page(s)	
LINE COUNT:	643	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A smoking article has a flavor-generating material as a burnable smoking element. The flavor-generating material includes a flavoring component-holding material formed of a heat-irreversibly gelled glucan and a flavoring component held in the holding material, and is obtained by thermally gelling a mixture of ungelled glucan and the flavoring component added thereto. Since the flavoring component is firmly fixed and held within the three-dimensional network structure of the gelled glucan, the storage properties and release-durability of the flavoring component are improved.

DETD The **glucan** used in the present invention is known per se in the art. For example, curdlan, which is most preferably used in the present invention, is a straight-chain  $\beta$ -1,3-**glucan** wherein about 400 to 500 D-glucose molecules are linked together through a  $\beta$ -glucosidic linkage at 1-3 position, and is insoluble in water and in most organic solvents. Moreover, the **glucan** is safe to human beings (for example, Unexamined Japanese Patent Application Publication 1-289457 discloses preparing an edible film by mixing a  $\beta$ -1,3-**glucan** such as curdlan with a **water-soluble** high molecular material). **Glucan** is commercially available, usually in the form of **powder**.

DETD . . . powdery mixture, 1.5 kg of the fine pieces of flavor-generating material sheet mentioned above, 1 kg of a mixture of **polypropylene glycol** and corn syrup as a humectant and 3 kg of water were added, and the resultant mixture was thoroughly mixed. . . .

L21 ANSWER 4 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 1998:1477 USPATFULL  
 TITLE: Substantially purified beta (1,3) finely ground yeast cell wall glucan composition with dermatological and nutritional uses  
 INVENTOR(S): Donzis, Byron A., # 18 W. Rivercrest, Houston, TX, United States 77042

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	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5705184		19980106
APPLICATION INFO.:	US 1996-691175		19960801 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1995-396490, filed on 2 Mar 1995, now patented, Pat. No. US 5576015		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Azpuru, Carlos A.		
NUMBER OF CLAIMS:	4		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	456		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Substantially purified beta (1,3) glucan extracts obtained from yeast cell walls, particularly finely ground, and including nutritional and dermatological applications, are disclosed.

SUMM **Glucan** extracted from yeast cell walls is known to be a potent stimulator of the immune system. Studies have indicated that parenteral administration of **glucan** significantly modifies host resistance to a wide variety of infectious disease induced by bacterial, fungal, viral, and parasitic organisms (DeLuzio, Trends in Pharmacological Science, 4:344-347, 1983). **Glucan** has also been shown to have potent antitumor activity (DeLuzio et al., Advances and Experimental Medicine and Biology, 21A:269-290, 1979). The mechanism by which **glucan** exerts its beneficial effects is believed to be by interaction with specific **glucan** receptors located on the macrophage cells. (Czop, Pathology however, a toxic effect from the parenteral administration of yeast extract beta (1-3) **glucan glucan** that appears to render the product unusable. This toxic effect is believed to derive from the **particulate** nature of the product, and has lead to a search for an effective **water soluble** yeast **glucan** extract.

Immunopathology

DETD . . . beating the mixture in the blender for several minutes. The resulting particle size of the mixture was reported as substantially colloidal, at least 1.0 microns or less.

L21 ANSWER 5 OF 19 USPATFULL on STN

Full Text

ACCESSION NUMBER: 97:122868 USPATFULL  
TITLE: Substantially purified beta (1,3) finely ground yeast cell wall glucan composition with dermatological and nutritional uses  
INVENTOR(S): Donzis, Byron A., #18 W. Rivercrest, Houston, TX, United States 77042

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5702719		19971230
APPLICATION INFO.:	US 1996-657626		19960530 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1995-396490, filed on 2 Mar 1995, now patented, Pat. No. US 5576015		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Azpuru, Carlos		
NUMBER OF CLAIMS:	2		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	453		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Substantially purified beta (1,3) glucan extracts obtained from yeast cell walls, particularly finely ground, and including nutritional and

# STN Columbus

dermatological applications, are disclosed.

SUMM **Glucan** extracted from yeast cell walls is known to be a potent stimulator of the immune system. Studies have indicated that parenteral administration of **glucan** significantly modifies host resistance to a wide variety of infectious disease induced by bacterial, fungal, viral, and parasitic organisms (DeLuzio, Trends in Pharmacological Science, 4:344-347, 1983). **Glucan** has also been shown to have potent antitumor activity (DeLuzio et al., Advances and Experimental Medicine and Biology, 21A:269-290, 1979). The mechanism by which **glucan** exerts its beneficial effects is believed to be by interaction with specific **glucan** receptors located on the macrophage cells. (Czop, Pathology however, a toxic effect from the parenteral administration of yeast extract beta (1-3) **glucan** that appears to render the product unusable. This toxic effect is believed to derive from the **particulate** nature of the product, and has lead to a search for an effective **water soluble** yeast **glucan** extract.

Immunopathology

DETD . . . beating the mixture in the blender for several minutes. The resulting particle size of the mixture was reported as substantially colloidal, at least 1.0 microns or less.

L21 ANSWER 6 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 97:107062 USPATFULL  
 TITLE:  $\beta$ -1,3-glucan polysaccharides, compositions, and their preparation and uses  
 INVENTOR(S): Renn, Donald W., Glen Cove, ME, United States  
 Dumont, Lisa E., Rockport, ME, United States  
 Snow, William C., Rockland, ME, United States  
 Curtis, Foner P., Rockland, ME, United States  
 PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5688775		19971118
APPLICATION INFO.:	US 1994-185642		19940124 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1991-776106, filed on 15 Oct 1991, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Kight, John		
ASSISTANT EXAMINER:	White, Everett		
LEGAL REPRESENTATIVE:	Ramstad, Polly E., Elden, Richard E.		
NUMBER OF CLAIMS:	34		
EXEMPLARY CLAIM:	1		
LINE COUNT:	2349		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Irradiated or nonirradiated substantially pure  $\beta$ -1,3-glucan polysaccharides, derivatives and coprocessed mixtures thereof with other hydrocolloids, methods for their preparation, and uses for the aqueous gels prepared from them, including their use in the electrophoresis of DNA, RNA, and their fragments.

DETD . . . gel at 4° C. for 2 hours. The gel was carefully inverted in the crystallizing dish. Using an FMC Marine Colloids.TM. Gel Tester model GT-2, (FMC Corp. Philadelphia, Pa.), in conjunction with a digital scale from AND®, model EW-3000A, the . . .

CLM What is claimed is:  
 13. A **water-soluble** alkali metal salt of a substantially pure  $\beta$ -1,3-**glucan** polysaccharide providing gel-forming sols which are clear gels which exhibit essentially no background fluorescence when stained with ethidium bromide and which exhibit essentially baseline UV absorption at 260 nm.

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L21 ANSWER 7 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 96:106190 USPATFULL  
 TITLE: Substantially purified beta (1,3) finely ground yeast cell wall glucan composition with dermatological and nutritional uses  
 INVENTOR(S): Donzis, Byron A., #18 W. Rivercrest, Houston, TX, United States 77042

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5576015		19961119
APPLICATION INFO.:	US 1995-396490		19950302 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Azpuru, Carlos		
LEGAL REPRESENTATIVE:	Shaper, Sue Z. Butler Binion, L.L.P.		
NUMBER OF CLAIMS:	13		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	501		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Substantially purified beta (1,3) glucan extracts obtained from yeast cell walls, particularly finely ground, and including nutritional and dermatological applications, are disclosed.

SUMM **Glucan** extracted from yeast cell walls is known to be a potent stimulator of the immune system. Studies have indicated that parenteral administration of **glucan** significantly modifies host resistance to a wide variety of infectious disease induced by bacterial, fungal, viral, and parasitic organisms (DeLuzio, Trends in Pharmacological Science, 4:344-347, 1983). **Glucan** has also been shown to have potent antitumor activity (DeLuzio et al., Advances and Experimental Medicine and Biology, 21A:269-290, 1979). The mechanism by which **glucan** exerts its beneficial effects is believed to be by interaction with specific **glucan** receptors located on the macrophage cells. (Czop, Pathology however, a toxic effect from the parenteral administration of yeast extract beta (1-3) **glucan** that appears to render the product unusable. This toxic effect is believed to derive from the **particulate** nature of the product, and has lead to a search for an effective **water soluble** yeast **glucan** extract.

DETD . . . beating the mixture in the blender for several minutes. The resulting particle size of the mixture was reported as substantially colloidal, at least 1.0 microns or less.

Immunopathology

L21 ANSWER 8 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 96:75134 USPATFULL  
 TITLE: Method for producing microgranulated particle  
 INVENTOR(S): Yano, Yoshiaki, Kakogawa, Japan  
 Fujimoto, Tamiji, Kobe, Japan  
 Hidaka, Takayoshi, Kobe, Japan  
 PATENT ASSIGNEE(S): Kanegafuchi Kagaku Kogyo Kabushiki Kaisha, Osaka, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5547683		19960820
	WO 9408709		19940428
APPLICATION INFO.:	US 1994-244375		19940608 (8)
	WO 1993-JP1442		19931006

## STN Columbus

19940608 PCT 371 date  
19940608 PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1992-297905	19921009
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Azpuru, Carlos	
LEGAL REPRESENTATIVE:	Birch, Stewart, Kolasch Birch, LLP	
NUMBER OF CLAIMS:	14	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	9 Drawing Figure(s); 9 Drawing Page(s)	
LINE COUNT:	587	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for producing a microgranulated particle having particle size of not more than 0.2 mm, wherein a fine powder with the average particle size of not more than 10  $\mu$ m, which is being agitated, tumbled or fluidized, is granulated, with a solution containing a binder alone or a binder and a surfactant being sprayed onto the surface thereof. The present invention allows to produce pharmaceutical preparations for poorly soluble and poorly absorbable drugs and preparations requiring a high content of the active ingredient. Also, it can provide an easy-to-handle powdery microgranulated particle in the field of food and fertilizers.

SUMM . . . been investigated for improving the solubility of poorly soluble drugs. For example, a poorly soluble drug is co-milled with a  $\beta$ -1,4-glucan powder (Japanese Patent Examined Publication No. 53-22138), a poorly soluble drug is kneaded with a water-soluble polymeric base material (Japanese Patent Laid-Open No. 61-63614) and a poorly soluble drug is adsorbed to and carried by the . . .

DETD . . . offer a greater improvement in water wetting. Examples of preferable surfactants include hydrophilic fatty acid esters of sucrose, polyoxyl stearate, polyethylene glycol, polysorbate and polyoxyethylene polyoxypropylene glycol. These surfactants exert an effect to improve the absorption of poorly soluble drug as well. . .

CLM What is claimed is:  
. . . or more kinds of hydrophilic surfactants selected from the group consisting of hydrophilic fatty acid esters of sucrose, polyoxyl stearate, polyethylene glycol, polysorbate and polyoxyethylene polyoxypropylene glycol.

L21 ANSWER 9 OF 19 USPATFULL on STN

Full Text

ACCESSION NUMBER: 95:11581 USPATFULL

TITLE: Molding and calcining of zeolite powder

INVENTOR(S): Takeuchi, Tatsuro, Tsukuba, Japan  
Mouri, Motoya, Tsuchiura, Japan  
Okabayashi, Saji, Kitakanbara, Japan  
Miyamura, Shoichi, Kitakanbara, Japan

PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Osaka, Japan  
(non-U.S. corporation)  
Mizusawa Industrial Chemicals, Ltd., Tokyo, Japan  
(non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5387564		19950207
	WO 9212104		19920723
APPLICATION INFO.:	US 1992-917115		19920930 (7)
	WO 1991-JP1226		19910913

# STN Columbus

19920930 PCT 371 date  
19920930 PCT 102(e) date

	NUMBER	DATE
	-----	-----
PRIORITY INFORMATION:	JP 1991-272	19910107
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Green, Anthony	
LEGAL REPRESENTATIVE:	Foley Lardner	
NUMBER OF CLAIMS:	25	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1080	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	A plastic or moldable composition of zeolite is obtained by adding 0.1-20 parts by weight of a $\beta$ -1,3-glucan, 1:1 layer-type clay mineral and 2:1 layer-type clay mineral together with an adequate amount of water to 100 parts by weight of zeolite powder, and then kneading the resultant mixture. The composition may be, for example, extrusion-molded to a honeycomb structure, and calcined, to provide a calcined article of honeycomb structure of zeolite which has a high dimensional accuracy and strength, and hence is useful as a drying agent, a catalyst or a carrier material therefor. The calcined article of zeolite has an excellent mechanical strength.	
SUMM	. . . powder can be made plastic by mixing and kneading with an inorganic binder such as natural clay, bentonite, kaolin or <b>colloidal silica</b> , or an organic binder such as cellulose derivatives, and thus can be plastic-molded and calcined.	
SUMM	. . . 59-26923 and No. 2-6846 that zeolite powder is mixed with an inorganic binder such as natural clay, bentonite, kaolin or <b>colloidal silica</b> , or an organic binder such as cellulose derivatives, together with water, to provide an aqueous composition, and then the. . .	
SUMM	. . . article of zeolite. Therefore, there may be used as such a molding aid, for example, cellulosic compounds, polyhydric compounds or <b>polyvinyl</b> compounds.	
SUMM	. . . example, glycerine; alkylene glycols such as ethylene glycol, propylene glycol, triethylene glycol or 1,3-butylene glycol; and polyoxyalkylene glycols such as <b>polyethylene glycol</b> or <b>polypropylene glycol</b> . These polyhydric compounds are also available on the market. They may be used regardless of molecular weight, and selected adequately. . .	
SUMM	The <b>polyvinyl</b> compound used includes, for example, <b>polyvinyl</b> alcohol, <b>polyvinyl</b> pyrrolidone, polyacrylic acid resins, polyacrylic acid salt resins, e.g., polyammonium acrylate, acrylic acid-maleic acid copolymers or their ammonium salts. The. . . resin may be cross-linked. Such a cross-linked polyacrylic acid resin is already known and is available on the market. These <b>polyvinyl</b> compounds are also available on the market. They may be used regardless of molecular weight, and selected adequately depending on. . .	
SUMM	Further according to the invention, the use of <b>polyethylene glycol</b> as the polyhydric compound preferably of a molecular weight of about 6000 together with inorganic fibers, for example, glass fibers,. . .	
SUMM	If necessary, the moldable composition or the molded article produced therefrom may comprise an alkyl ether of <b>polyethylene glycol</b> , a surfactant as a wetting agent, or zinc stearate, aluminum stearate or magnesium stearate as a lubricant.	
SUMM	. . . of producing such a composition including the kneaded solid composition as hereinbefore mentioned. By way of example, at first a $\beta$ -1,3-glucan, and if necessary, together with a molding aid and/or a sintering agent, all as <b>powder</b> , are added to zeolite <b>powder</b> , to prepare a mixture. Alternatively, a solution or dispersion of a $\beta$ -1,3-glucan, and if necessary, together with a molding aid	

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in a small amount of water or a **water soluble** organic solvent such as methanol or ethanol, is added to zeolite **powder**, to prepare a mixture. Thereafter, the mixture is fully admixed so that the  $\beta$ -1,3-**glucan**, molding aid and sintering agent are dispersed uniformly throughout the mixture. Then an appropriate amount of water or an aqueous. . . is added to the mixture and fully kneaded, thereby to provide a kneaded and moldable solid composition of zeolite. A  $\beta$ -1,3-**glucan**, molding aid and sintering agent may be added separately and admixed with zeolite **powder**.

DETD . . . (trademark) available from Japan Sheet Glass K.K.), 12.5 g of curdlan, 31.3 g of methyl cellulose and 6.2 g of **polyethylene glycol** (Macrogol (trademark) 6000 available from Sanyo Kasei Kogyo K.K.).

L21 ANSWER 10 OF 19 IFIPAT COPYRIGHT 2004 IFI on STN DUPLICATE 1

Full Text

AN 02560623 IFIPAT;IFIUDB;IFICDB  
 TITLE: SEGREGATION REDUCING AGENT FOR HYDRAULIC COMPOSITION AND HYDRAULIC COMPOSITION; ADDING WATER-SOLUBLE THICKENER TO A CULTURE OF A MICROORGANISM CAPABLE OF PRODUCING A 1,3-GLUCAN  
 INVENTOR(S): Haze, Akira, Kawanishi, JP  
 Miyanagi, Kazuki, Kakogawa, JP  
 Uchida, Shunsaku, Himeji, JP  
 Yamamoto, Yoshihisa, Kakogawa, JP  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd, Osaka, JP  
 PRIMARY EXAMINER: Green, Anthony  
 AGENT: Wegner, Cantor, Mueller Player

	NUMBER	PK	DATE
PATENT INFORMATION:	US 5376173	A	19941227
	(CITED IN 002 LATER PATENTS)		
APPLICATION INFORMATION:	US 1993-120344		19930914
EXPIRATION DATE:	14 Sep 2013		

	NUMBER	DATE
PRIORITY APPLN. INFO.:	JP 1992-247692	19920917
FAMILY INFORMATION:	US 5376173	19941227
DOCUMENT TYPE:	Utility	
	EXPIRED	
FILE SEGMENT:	CHEMICAL	
	GRANTED	
MICROFILM REEL NO:	006699	FRAME NO: 0059
NUMBER OF CLAIMS:	11	
GRAPHICS INFORMATION:	1 Drawing Sheet(s), 2 Figure(s).	

AB A segregation reducing agent for a hydraulic composition which is obtained by adding a **water-soluble** thickener to a culture of a microorganism capable of producing a Beta -1,3-**glucan** selected from the group consisting of curdlan, palamylon and pachyman, in a sufficient amount to give a viscosity to the culture of from about 200 to 2000 cp, followed by spray drying so as to form a **powder** having a core of the Beta -1,3-**glucan** and a coating of the **water-soluble** thickener.

AB A segregation reducing agent for a hydraulic composition which is obtained by adding a **water-soluble** thickener to a culture of a microorganism capable of producing a Beta -1,3-**glucan** selected from the group consisting of curdlan, palamylon and pachyman, in a sufficient amount to give a viscosity to the culture of from about 200 to 2000 cp, followed by spray drying so as to form a **powder** having a core of the Beta -1,3-**glucan** and a coating of the **water-soluble** thickener.

ECLM 10. A hydraulic composition comprising a segregation reducing agent wherein said segregation reducing agent is **obtained by** adding a

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**water-soluble** thickener to a culture of a microorganism capable of producing a **Beta -1,3-glucan** selected from the group consisting of curdlan, paramylon and pachyman, in a sufficient amount to give a viscosity to the culture of from about 200 to 2000 cp, followed by spray drying so as to form a **powder** having a core of the **Beta -1,3-glucan** and a **coating** of the **water-soluble** thickener and wherein the amount of the segregation reducing agent is from about 0.5 Kg to about 5 Kg per. . . .

ACLM 6. A segregation reducing agent according to claim 1, wherein the water-soluble thickener is **polyethylene glycol**.

L21 ANSWER 11 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 94:24094 USPATFULL  
 TITLE: Method of producing a filtering material  
 INVENTOR(S): Tsuru, Sumiaki, Tokyo, Japan  
 PATENT ASSIGNEE(S): Bestex Kabushiki-Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5296254		19940322
APPLICATION INFO.:	US 1992-896042		19920608 (7)
DISCLAIMER DATE:	20090901		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1991-63903	19910606
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Beck, Shrive	
ASSISTANT EXAMINER:	Dudash, Diana	
LEGAL REPRESENTATIVE:	Wenderoth, Lind Ponack	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	4	
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 1 Drawing Page(s)	
LINE COUNT:	622	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB To produce a filtering material for adsorptively capturing very fine particles such as fungus, pollen, virus, bacteria or the like at a high efficiency, an aqueous treatment solution is first prepared by dissolving porous apatite particles of 0.5 to 40% by weight, preferably, 0.5 to 30% by weight and a water soluble glucan of 0.5 to 15% by weight in water. A sheet-shaped raw material is then coated with the treatment solution with the aid of a rotating drum of which part is always dipped in the treatment solution, and thereafter, the sheet-shaped raw material having the treatment solution coated thereon is dried. Alternatively, an aqueous treatment solution prepared by dissolving only a water soluble glucan of 0.5 to 25% by weight in water may be substituted for the aforementioned aqueous treatment solution. In this case, after a sheet-shaped raw material is coated with the treatment solution, porous apatite particles are deposited on the sheet-shaped raw material by employing a dispersing process or a spraying process before the treatment solution coated on the sheet-shaped raw material is kept still wet. Subsequently, the sheet-shaped raw material having the treatment solution coated thereon and the porous apatite particles deposited thereon is dried.

DETD . . . become porous. To practically produce the porous apatite particles, it is recommended that a gas generating substance such as a **polyvinyl alcohol** or the like is mixed with them before a sintering operation is performed for the porous apatite particles.

DETD On the other hand, with respect to the **water soluble glucan**, it is

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recommended to use, e.g., a triose having a molecular weight of 30,000 to 300,000. The triose itself serves. . . fine particles such as spore, pollen, fungus or the like each having such a structure that the surface of each **particle** is covered with saccharide chains or mucopolysaccharides by the action of hydrogen bond or the like.

DETD . . . of fibers in the sheet-shaped raw material to two components, i.e., the porous apatite particles and the glucan, e.g., a **polyvinyl** alcohol having a small number of molecules may be added to the filtering material. In addition, to improve microbicydal activity. . .

L21 ANSWER 12 OF 19 IFIPAT COPYRIGHT 2004 IFI on STN DUPLICATE 2

## Full Text

AN 02402328 IFIPAT;IFIUDB;IFICDB  
 TITLE: BINDERS FOR FORMING A CERAMICS SHEET AND APPLICATIONS THEREOF; ACRYLIC, POLYSACCHARIDE, **POLYVINYL** ACETAL  
 INVENTOR(S): Mouri, Motoya, Tsuchiura, JP  
 Sahara, Tetsuya, Tsukuba, JP  
 Takeuchi, Tatsuro, Tsukuba, JP  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd, Osaka, JP  
 PRIMARY EXAMINER: Michl, Paul R  
 ASSISTANT EXAMINER: DeWitt, LaVonda  
 AGENT: Wegner, Cantor, Mueller Player

	NUMBER	PK	DATE
PATENT INFORMATION:	US 5248712	A	19930928
	(CITED IN 004 LATER PATENTS)		
APPLICATION INFORMATION:	US 1991-809329		19911218
EXPIRATION DATE:	18 Dec 2011		

	NUMBER	DATE
PRIORITY APPLN. INFO.:	JP 1990-413544	19901221
	JP 1991-199042	19910808
FAMILY INFORMATION:	US 5248712	19930928
DOCUMENT TYPE:	Utility	
	EXPIRED	
FILE SEGMENT:	CHEMICAL	
	GRANTED	
MICROFILM REEL NO:	005969	FRAME NO: 0635
NUMBER OF CLAIMS:	15	

AB A binder for preparing an aqueous ceramics slurry, which contains a hydrophilic polymer such as a **water-soluble** (meth)acrylic polymer, a polysaccharide of natural origin such as pectin, pectinic acid, **glucan**, etc., and a **polyvinyl** compound such as poly(vinyl butyral). The aqueous ceramics slurry contains less than 25 parts by weight of the binder to 100 parts by weight of ceramics **powder**. The slurry is applied on a carrier film by a doctor blade method and dried to give a ceramics green sheet. A ceramics sheet can be produced by sintering the green sheet.

TI BINDERS FOR FORMING A CERAMICS SHEET AND APPLICATIONS THEREOF; ACRYLIC, POLYSACCHARIDE, **POLYVINYL** ACETAL

AB A binder for preparing an aqueous ceramics slurry, which contains a hydrophilic polymer such as a **water-soluble** (meth)acrylic polymer, a polysaccharide of natural origin such as pectin, pectinic acid, **glucan**, etc., and a **polyvinyl** compound such as poly(vinyl butyral). The aqueous ceramics slurry contains less than 25 parts by weight of the binder to 100 parts by weight of ceramics **powder**. The slurry is applied on a carrier film by a doctor blade method and dried to give a ceramics green.

ACLM . . . polysaccharide relative to the poly(vinyl acetal) is 1to 10,000 parts by weight of polysaccharide to 100 parts by weight of **polyvinyl** compound.

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L21 ANSWER 13 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 92:84533 USPATFULL  
 TITLE: Hydraulic inorganic composition and molded articles thereof  
 INVENTOR(S): Wada, Takeo, Kawanishi, Japan  
 Matsuura, Kazumi, Itami, Japan  
 Kato, Mitsuo, Ryugasaki, Japan  
 Matsuda, Hideaki, Nishinomiya, Japan  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Osaka, Japan  
 (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5154771		19921013
APPLICATION INFO.:	US 1990-553816		19900719 (7)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1989-188280	19890719
	JP 1990-59421	19900309
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Bell, Mark L.	
ASSISTANT EXAMINER:	Green, Anthony J.	
LEGAL REPRESENTATIVE:	Wegner, Cantor, Mueller Player	
NUMBER OF CLAIMS:	15	
EXEMPLARY CLAIM:	1	
LINE COUNT:	676	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A hydraulic inorganic compositions which comprises a hydraulic inorganic powder at least one of polysaccharides selected from the group consisting of  $\beta$ -1,3-glucans, pullulan and XCD-Polymer in an amount of 0.1-10 parts by weight in relation to 100 parts by weight of the hydraulic inorganic powder, and water in an effective amount.

The composition preferably further contains a reinforcing fiber, a filler, in particular mountain leather, a coagulant and/or a second molding aid, in particular, methyl cellulose.

The composition is hardened by hydration under normal pressure to provide a hardened molded article such as a cement board.

SUMM . . . may also be obtained by freezing the alkaline solution, thawing the frozen solution by putting it into contact with a **water soluble** organic solvent to deposit the **glucan**, and then neutralizing the **glucan**. The thus obtained **glucan** may be dehydrated and dried to **powder**, if desirable. An alcohol such as methanol is preferably used to deposit the **glucan**, while an aqueous solution of sodium hydroxide, potassium hydroxide or ammonium hydroxide is preferably used to dissolve the **glucan** therein in the above methods. The neutralization may be carried out usually with a mineral acid such as hydrochloric acid.

SUMM The second molding aid includes, for example, cellulosic compounds, polyhydric compounds and **polyvinyl** compounds.

SUMM . . . includes, for example, glycerine; alkylene glycols such as ethylene glycol, propylene glycol or 1,3-butylene glycol; and polyalkylene glycols such as **polyethylene glycol** or **polypropylene glycol**. A variety of **polyvinyl** compounds may be useful as the second molding aid, and there may be used, for instance, **polyvinyl alcohol**, **polyvinyl pyrrolidone**, polyacrylic acid resins, polyacrylic acid salt resins, e.g., polyammnoui acrylate, acrylic acid-maleic acid copolymers, or their ammonium salts. The . . .

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SUMM . . . variety of compounds are usable as the second molding aid in addition to the above, and for example, carboxymethyl starch, **polyvinyl** alcohol, **polyvinyl** acetate emulsion or styrene-butadiene rubber latex may be mentioned. It is particularly useful to use an emulsion binder in the. . .

SUMM Further, a wetting agent or surfactant such as **polyethylene glycol** alkyl ethers or a water repelling agent such as zinc stearate, aluminum stearate or magnesium stearate may also be incorporated. . .

SUMM . . . inorganic composition of the invention preferably contains reinforcing fibers. The reinforcing fibers include, for example, synthetic organic fibers such as **polyvinyl** alcohol fibers, polyacrylonitrile fibers, polyamide fibers, polyester fibers, polyethylene fibers, polypropylene fibers, polyvinylidene chloride fibers, **polyvinyl** chloride fibers or polytetrafluoroethylene fibers; natural fibers such as cotton, hemp, hemp palm, paper bush, wood pulp or waste paper. . .

SUMM Among these reinforcing fibers, **polyvinyl** alcohol fibers or polyacrylonitrile fibers are particularly preferred, and the former is most preferred on account of its high compatibility. . .

SUMM **Polyvinyl** alcohol fibers, 1.6 d, 5 mm in length, from Unitica Kasei K.K.

DETD . . . sepiolite were admixed each in an amount as shown in the Table 1 in a first polyethylene envelope, while the **polyvinyl** alcohol fibers and portland cement were admixed together in an amount as shown in the Table 1 in a second. . .

DETD The first and second mixtures were then mixed together with a home use mixer to unravel the **polyvinyl** alcohol fibers to filaments and to prepare a uniform mixture.

DETD . . . weight)

	10	11	12
Curdlan	20	20	--
XCD-Polymer	--	--	20
Polyethylene oxide	4	4	4
Methyl cellulose	4	4	4
Sepiolite	60	60	60
<b>Polyvinyl</b> alcohol fibers	30	7	7
Normal portland cement	882	905	905
Water	416	406	428

CLM What is claimed is:

5. The composition as claimed in claim 4 wherein the reinforcing fiber is **polyvinyl** alcohol fiber.

L21 ANSWER 14 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 87:60018 USPATFULL

TITLE: Method of preparing impression taking and molding materials and dental diagnosing/treating chemical materials used in the method

INVENTOR(S): Buma, Mitsuo, Kawagoe, Japan  
Yuda, Sadayuki, Suita, Japan  
Sato, Masatsune, Matsudo, Japan  
Okada, Mitsuo, Sayami, Japan

PATENT ASSIGNEE(S): Sankin Kogyo Kabushiki Kaisha, Osaka, Japan (non-U.S. corporation)

NUMBER KIND DATE

## STN Columbus

PATENT INFORMATION: US 4689079 19870825  
APPLICATION INFO.: US 1985-796937 19851112 (6)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1984-238071	19841112
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Morris, Theodore	
LEGAL REPRESENTATIVE:	Handal Morofsky	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 1 Drawing Page(s)	
LINE COUNT:	211	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Powder of chemical material for impression taking and molding for teeth is previously packed with a water-soluble film in an amount determined by each clinical treatment. A desired impression taking or molding material is obtained by putting such pack or packs in a proper amount of water and properly kneading them.

SUMM Since the above problems result from the fact that chemical material **powder** must be measured for each clinical treatment, they can be solved by previously wrapping a predetermined amount of the chemical material **powder** in unit with **water-soluble** film. When it is so desired as to take or mold an impression of teeth in dental diagnosis and treatment, desired impression taking or molding material can be easily obtained merely by immersing the wrapped chemical material **powder** in a proper amount of water and then mixing and kneading them. Such **watersoluble** film may be made of **polyvinyl** alcohol (PVA), polysaacharide such as **glucan**, gelatine, cellulose or the like which are all well known and have been confirmed that no bad influence is exerted. . . human body but also on the intended properties of the impression taking or molding material. The amount of chemical material **powder** to be wrapped in one pack may b determined to be equal to the amount required for each clinical treatment. . . minimum use unit for each chemical material. In either case, by previously wrapping a certain amount of chemical material, such **powder** measurement as mentioned above will become unnecessary. Especially in the former case, a user, i.e., a dentist or a dental mechanic can quickly prepare a desired impression taking or molding material only by selecting a pack of material **powder** containing an amount corresponding to the clinical treatment. In the latter case, on the other hand, a certain number of.

DETD . . . any packing manner so long as a predetermined amount of the material powder 1 can be packed successively. Further, although **polyvinyl** alcohol (PVA), polysaacharide, gelatine and cellulose have been enumerated as a material of the water-soluble film 2, any other material may be. . .

L21 ANSWER 15 OF 19 USPATFULL on STN

Full Text

ACCESSION NUMBER: 85:29761 USPATFULL  
TITLE: Enteric coating for pharmaceutical dosage forms  
INVENTOR(S): McGinley, Emanuel J., Morrisville, PA, United States  
Tuason, Jr., Domingo C., Bensalem, PA, United States  
PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4518433		19850521

## STN Columbus

APPLICATION INFO.: US 1982-440118 19821108 (6)  
DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Morris, Theodore  
LEGAL REPRESENTATIVE: Johnson, C. H., Egolf, C.  
NUMBER OF CLAIMS: 22  
EXEMPLARY CLAIM: 1  
LINE COUNT: 412

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The application discloses a process for making a polymeric powder which is readily dispersible in water to provide a composition useful for forming an enteric coating on pharmaceutical dosage forms and also a process for using the powder for its intended purpose.

SUMM . . . one nonionic, anionic or cationic emulsifying agent. The crude emulsion is then subjected to comminuting forces sufficient to form a colloidal or near colloidal dispersion of small, even sized spherical polymer particles having a diameter of less than 1.0  $\mu\text{m}$ , preferably between 0.2 and . . .

SUMM . . . also applies for the same reason to aqueous dispersions of such other known enteric polymers as hydroxypropyl methylcellulose phthalate and polyvinyl acetate phthalate. Not being able to successfully store the polymer dispersion is particularly undesirable in view of the fact that. . .

SUMM According to U.S. Pat. No. 3,539,365 to Durand et al., an aqueous dispersion of non-water soluble beta-1,4 glucan particles of less than 1.0  $\mu\text{m}$  in greatest dimension are spray dried after first being coated while in dispersion with a water soluble barrier material. Without the barrier the beta-1,4 glucan particles would bond together in aggregates which are too tightly bonded to be redispersed as stable dispersions. The barrier material surrounding each particle prevents direct contact between the beta-1,4 glucan particles and avoids the undesirable aggregation of particles. The spray dried particles may be readily redispersed in water to form. . . dispersion. The Durand et al. patent mentions a number of more or less useful barrier materials, all of which are water soluble. The amount and type of water soluble barrier materials described by Durand et al would interfere with the enteric performance of coating compositions of enterosoluble polymers dried. . .

SUMM U.S. Pat. No. 2,800,463 to Morrison describes a process for converting an aqueous polyvinyl acetate emulsion containing emulsifying agents or protective colloids like polyvinyl alcohol, gum tragacanth, gum acacia, etc. into a powder capable of being redispersed in water. As described, the process involves. . .

DETD . . . in the art that it is equally applicable in principal to other known enteric polymers such as hydroxypropyl methylcellulose phthalate, polyvinyl acetate phthalate, and the like.

L21 ANSWER 16 OF 19 USPATFULL on STN

Full Text

ACCESSION NUMBER: 84:42461 USPATFULL  
TITLE: Enteric coating for pharmaceutical dosage forms  
INVENTOR(S): McGinley, Emanuel J., Morrisville, PA, United States  
Tuason, Jr., Domingo C., Bensalem, PA, United States  
PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4462839		19840731
APPLICATION INFO.:	US 1983-504779		19830616 (6)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		

## STN Columbus

PRIMARY EXAMINER: Morris, Theodore  
LEGAL REPRESENTATIVE: Johnson, C. H., Egolf, C.  
NUMBER OF CLAIMS: 20  
EXEMPLARY CLAIM: 1  
LINE COUNT: 459

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The application discloses a process for making a polymeric powder which is readily dispersible in water to provide a composition useful for forming an enteric coating on pharmaceutical dosage forms and also a process for using the powder for its intended purpose.

SUMM . . . one nonionic, anionic or cationic emulsifying agent. The crude emulsion is then subjected to comminuting forces sufficient to form a **colloidal** or near **colloidal** dispersion of small, even sized spherical polymer particles having a diameter of less than 1.0  $\mu\text{m}$ , preferably between 0.2 and. . .

SUMM . . . also applies for the same reason to aqueous dispersions of such other known enteric polymers as hydroxypropyl methylcellulose phthalate and **polyvinyl** acetate phthalate. Not being able to successfully store the polymer dispersion is particularly undesirable in view of the fact that. . .

SUMM According to U.S. Pat. No. 3,539,365 to Durand et al., an aqueous dispersion of non-**water soluble** beta-1,4 **glucan** rod like particles of less than 1.0  $\mu\text{m}$  in length are spray dried after first being coated while in dispersion with a **water soluble** barrier material. Without the barrier, the beta-1,4 **glucan** particles would irreversibly bond together in aggregates so that the individually beta-1,4 **glucan** particles could not be redispersed as stable dispersions. The barrier material surrounding each **particle** prevents direct contact between the beta-1,4 **glucan** particles and avoids the irreversible bonding of particles. The spray dried particles may be readily redispersed in water to form. . . dispersion. The Durand et al. patent mentions a number of more or less useful barrier materials, all of which are **water soluble** over a wide range of pH and none of which solubilize the beta-1,4 **glucan**. The amount and type of **water soluble** barrier materials described by Durand et al would interfere with the enteric performance of coating compositions of enterosoluble polymers dried. .

SUMM U.S. Pat. No. 2,800,463 to Morrison describes a process for converting an aqueous **polyvinyl** acetate emulsion containing emulsifying agents or protective **colloids** like **polyvinyl** alcohol, gum tragacanth, gum acacia, etc. into a powder capable of being redispersed in water. All of the protective **colloids** mentioned by Morrison are water soluble over a wide range of pH. As described, the process involves either spray drying. . . on a barrier material, to prevent polymer particle sintering, fusion or coalescence during spray drying. Additionally, if the Morrison protective **colloids** were used in quantities sufficient to prevent coalescence of enteric polymer particles during spray drying, the protective **colloids** would adversely affect enteric performance of films formed from the spray dried compositions. The dried powder is described by Morrison. . .

SUMM . . . the addition of a suitable plasticizer such as dibutyl sebacate, diethyl phthalate, tributyl citrate, triglycerylacetate, propylene glycol, castor oil, triacetin, **polyethylene glycol** or mixture of these or other pharmaceutically acceptable plastizers. The plasticizer is preferably used in an amount of between 10%. . .

DETD . . . in the art that it is equally applicable in principal to other known enteric polymers such as hydroxypropyl methylcellulose phthalate, **polyvinyl** acetate phthalate, and the like.

L21 ANSWER 17 OF 19 USPATFULL on STN

Full Text

ACCESSION NUMBER: 82:3376 USPATFULL

# STN Columbus

TITLE: Stabilizing agent for dry mix food products  
 INVENTOR(S): McGinley, Emanuel J., Morrisville, PA, United States  
 PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4311717		19820119
APPLICATION INFO.:	US 1980-150821		19800519 (6)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Corbin, Arthur L.		
LEGAL REPRESENTATIVE:	Johnson, Charles H., Horsky, Eugene G.		
NUMBER OF CLAIMS:	3		
EXEMPLARY CLAIM:	1		
LINE COUNT:	212		

AB A stabilizing agent for dry mix food products is a powder the individual particles of which consist of beta-1, 4 glucan, sodium carboxymethyl cellulose and either whey or milk solids. The composition of the stabilizing agent and the method of making and using the same are disclosed.

SUMM U.S. Pat. No. 3,539,365 to Durand et al. describes a stabilizing agent consisting primarily of beta-1,4 **glucan** but having intimately associated therewith a relatively small amount, from about 5% to about 15% based upon combined weight, of. . . described in U.S. Pat. No. 3,684,523 to McGinley et al. As described in said U.S. Pat. No. 3,539,365, the beta-1,4 **glucan** is in the form of **colloidal** size microcrystals derived from a suitable cellulose source such as wood pulp by chemical degradation and mechanical disintegration in the presence of water. This beta-1,4 **glucan** is commonly referred to as microcrystalline cellulose. According to U.S. Pat. No. 3,539,365, a relatively small amount of **water-soluble** sodium carboxymethyl cellulose (CMC) is introduced in dry **powder** form during the mechanical disintegration, and as disintegration proceeds, the dissolved CMC at least partially coats the beta-1,4 **glucan** microcrystals and prevents the microcrystals from rebonding to one another upon subsequent drying. By reason of the coating of CMC, the dried beta-1,4 **glucan** microcrystals are readily redispersed in an aqueous medium with only mild agitation. The product of U.S. Pat. No. 3,539,365 is one component of the **powder** form stabilizing agent of the present invention.

SUMM While various functional properties of dispersed **colloidal** beta-1,4 glucan have proven beneficial in a number of wet processed systems for pre-prepared food products, the dried beta-1,4 glucan. . . drinks. It is believed that the protein and calcium salts contained in dry mix food preparations inhibit peptization of the **colloidal** size beta-1,4 glucan microcrystals. In certain instances extreme levels of shear which would be available in a commercial food plant. . .

L21 ANSWER 18 OF 19 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 80:19625 USPATFULL  
 TITLE: Means rendering difficult to disperse materials easily dispersible  
 INVENTOR(S): McGinley, Emanuel J., Morrisville, PA, United States  
 PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4199368		19800422
APPLICATION INFO.:	US 1978-922876		19780707 (5)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1976-691268, filed		

# STN Columbus

on 1 Jun 1976, now abandoned  
DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Pertilla, Theodore E.  
LEGAL REPRESENTATIVE: Johnson, Charles H.  
NUMBER OF CLAIMS: 6  
EXEMPLARY CLAIM: 1  
LINE COUNT: 207

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Oleaginous and other materials that are difficult to form into aqueous dispersions are rendered easily dispersible in cold water by partially encapsulating them around particles comprising from about 70 to 99 parts of disintegrated beta-1,4 glucan and from about 1 to 30 parts of a water-soluble polymer intimately associated therewith and especially where the particles comprise from about 85 to 95 parts of disintegrated beta-1,4 glucan and from about 5 to 15 parts of sodium carboxymethyl cellulose.

SUMM The basic unit of the present invention is a **particle** comprising by weight from about 70 to 99 parts of disintegrated beta-1,4 **glucan** and from about 1 to 30 parts of a **water-soluble** polymer intimately associated therewith. In the preferred form of the invention, the basic unit comprises by weight from about 85 to 95 parts of a disintegrated beta-1,4 **glucan** intimately associated with from about 5 to 15 parts of sodium carboxymethyl cellulose, especially sodium carboxymethyl cellulose having a degree of substitution of  $0.75 \pm 0.15$ . The nature of the preferred **particulate** material and a method of preparation thereof is described in the U.S. patent to Durand et al U.S. Pat. No. . . . water to form a thixotropic gel. Thus, this invention is not directed toward forming a dispersion of the water-insoluble beta-1,4 **glucan**-containing particles but involves using these particles as a means of attaining a dispersion of other water-insoluble materials as well as difficult to disperse **water-soluble** materials. When these basic particles are put in water, irrespective of temperature, they swell or expand rapidly and break into. . . .

SUMM According to the present invention, the basic particles comprising beta-1,4 **glucan**, having intimately associated therewith carboxymethyl cellulose or other **water-soluble** polymer, are coated with or encapsulated by the material it is desired to disperse. The coating or encapsulating material should. . . . hard wax material, it may be necessary to apply heat and melt it before mixing it with the basic beta-1,4 **glucan**-containing particles. As an alternative to heating, the material in solid form may be liquefied by an appropriate solvent. However, since. . . . dispersion of the difficult to disperse material, water is not employed as the solvent even when the material may be **water soluble**. For example, if the material to be dispersed is **polyethylene glycol 4000**, which is **water soluble**, it is liquidified by heating or dissolved in ethanol, ethanol not being effective to cause rapid expansion of the basic beta-1,4 **glucan**-containing particles. The basic particles are added to the material to be dispersed in sufficient quantity so as to absorb and adsorb the liquid material and form, upon stirring, a free-flowing **powder** or granular material. If desired, the material to be dispersed may be added to a quantity of the basic particles. . . .

DETD It has previously been mentioned that the basic **particle** used in carrying out the invention may consist of disintegrated beta-1,4 **glucan** associated with a **water-soluble** polymer other than sodium carboxymethyl cellulose. Some examples of other polymers that have been found satisfactory are xanthan gum, sodium. . . .

L21 ANSWER 19 OF 19 USPATFULL on STN

Full Text

ACCESSION NUMBER: 79:29194 USPATFULL

# STN Columbus

TITLE: Tablet compositions  
 INVENTOR(S): Omura, Yukikazu, Miyazaki, Japan  
 Uesugi, Juno, Miyazaki, Japan  
 Takeo, Kimihiko, Miyazaki, Japan  
 Hirano, Tooichiroo, Miyazaki, Japan  
 PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4159346		19790626
APPLICATION INFO.:	US 1977-823059		19770809 (5)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1976-106246	19760907
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Rose, Shep K.	
LEGAL REPRESENTATIVE:	Johnson, Charles H.	
NUMBER OF CLAIMS:	3	
EXEMPLARY CLAIM:	1	
LINE COUNT:	385	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A pharmaceutical or other tablet containing a pharmacologically active ingredient in an amount of at least about 75% of the weight of the tablet is formed by a wet-granulation tableting process and involves the use by  $\beta$ -1,4 glucan powder and a particular specified binder.

SUMM . . . hydroxypropylstarch (hereinafter abbreviated as HPS), hydroxypropyl cellulose (hereinafter abbreviated as HPC), potato starch (hereinafter abbreviated as PS), corn starch, agar-agar, **polyvinyl alcohol** (hereinafter abbreviated as **PVA**), **polyvinyl pyrrolidone** (hereinafter abbreviated as **PVP**), etc., binders which satisfy all the requirements after tableting are found to be the three. . .

DETD . . . 7.5 6.0 100.1

100.1  
 100.1

20 8.4 more than 65  
 39.5  
 83.7  
 96.6

25 9.6 more than 65  
 15.9  
 63.4  
 81.0

PVA 5 3.9 3.9 64.3  
 91.4  
 98.4

10 5.8 35.0 25.2  
 53.0  
 79.2

15 6.7 more than 65  
 6.3 25.1  
 46.9

CLM What is claimed is:

. . . method of making a tablet containing at least about 75% by weight of a pharmacologically active ingredient comprising mixing a **water-soluble** pharmacologically active material with **beta-1,4 glucan powder**, kneading the mixture to such extent as to reduce the **particle size** of the **beta-1,4 glucan powder** to 5 to 20 microns, adding to the mixture an aqueous solution of a **water-soluble** binder

## STN Columbus

consisting of one or more materials selected from the class consisting of hydroxypropyl starch, potato starch and sodium carboxymethylcellulose, . . .

```
=> l19 and (skin or hair or cosmetic or dermatological)
L19 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

```
=> s l19 and (skin or hair or cosmetic or dermatological)
  32 FILES SEARCHED...
L22          14 L19 AND (SKIN OR HAIR OR COSMETIC OR DERMATOLOGICAL)
```

```
=> s l22 not l31
L31 NOT FOUND
The L-number entered could not be found. To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).
```

```
=> s l22 not l21
  33 FILES SEARCHED...
L23          7 L22 NOT L21
```

```
=> dup rem l23
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,
IMSPRODUCT, KOSMET, MEDICONF, NUTRACEUT, PCTGEN, PHARMAML'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L23
L24          7 DUP REM L23 (0 DUPLICATES REMOVED)
```

```
=> d l24 ibib ab kwic
'AB' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files. Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ibib kwic
```

```
L24 ANSWER 1 OF 7 PHIN COPYRIGHT 2004 PJB on STN
Full Text
```

ACCESSION NUMBER: 2003:10331 PHIN  
DOCUMENT NUMBER: W00801638  
DATA ENTRY DATE: 1 Jun 2003  
TITLE: April Patent Applications  
SOURCE: Target (2003) No. 18 p9  
DOCUMENT TYPE: Newsletter  
FILE SEGMENT: FULL  
TX

Assignee/ Applicant Name	Description	Patent
3M devices	Transdermal delivery	WO3030880A1
Alexza Molecular Delivery	Delivery of drug esters by inhalation	WO3026631A1
Alza	Diffusional implantable delivery system	EP1304105A2

# STN Columbus

treatment sites

Vapotronics	Inhalation device with an optimised air-flow path	US20030072717A1
West Pharmaceutical Services	Chitosan-gelatin microparticles	EP0952822B1
Wyeth	Extended-release formulation containing venlafaxin	EP1028718B1
Yamanouchi	Granulate for the preparation of fast-disintegrating and fast-dissolving compositions containing a high amount of drug	EP0910344B1
Yamanouchi	Pharma composition with improved in peroral absorbability	EP1302201A1
Yissum Research Development	A method for preparing liposome formulations with a predefined release profile	WO3032947A2

=> d 124 ibib kwic 2-7

L24 ANSWER 2 OF 7 USPATFULL on STN

## Full Text

ACCESSION NUMBER: 2003:102146 USPATFULL

TITLE: **Cosmetic** or medical preparation for topical use

INVENTOR(S): Bengs, Holger, Frankfurt, GERMANY, FEDERAL REPUBLIC OF  
Schneller, Arnold, Messel, GERMANY, FEDERAL REPUBLIC OF  
Grande, Jurgen, Bad Soden, GERMANY, FEDERAL REPUBLIC OF  
Schuth, Silke, Ruppach-Goldhausen, GERMANY, FEDERAL  
REPUBLIC OF  
Bohm, Gitte, Frankfurt, GERMANY, FEDERAL REPUBLIC OF  
Braunagel, Alfred, Mainz, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): Celanese Ventures GmbH, GERMANY, FEDERAL REPUBLIC OF  
(non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6548075	B1	20030415
	WO 2000038623		20000706
APPLICATION INFO.:	US 2001-869399		20011114 (9)
	WO 1999-EP9293		19991130

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1998-19860371	19981228
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Page, Thurman K.	
ASSISTANT EXAMINER:	Howard, S.	
LEGAL REPRESENTATIVE:	Viliacorta, Gilberto M., Sira, Serge, Katten Muchin	

# STN Columbus

Zavis Roseman

NUMBER OF CLAIMS: 18  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)  
LINE COUNT: 772

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI **Cosmetic** or medical preparation for topical use

SUMM The present invention relates to a **cosmetic** or medicinal preparation for topical application, in particular a skincare composition, comprising spherical microparticles which consist entirely or partially of. . . of at least one linear water-insoluble polyglucan in preparations of this type. In particular, the present invention relates to a **cosmetic** or medicinal preparation for topical application which on application imparts a particularly pleasant soft feel.

SUMM The use of polysaccharides based on starch, such as polyglucans, for **cosmetic** purposes has been known since time immemorial.

SUMM Recently, polysaccharide products for **cosmetic** and therapeutic purposes have been increasingly developed which have specific property profiles. Thus a high caring action for irritated, dry **skin** is described by H. Eggensperger, M. Wilker in SOFW-Journal, 123, issue August 1997, pages 542 to 546, "Multiaktivwirksame Polysaccharide, Teil. . . polysaccharides, part I--Fungal extracts]" for beta-polyglucans from fungi such as yeasts and their carboxymethylated derivatives. Particularly advantageous effects on the **skin** were demonstrated for beta-1,3-polyglucans having beta-1,6 linkages for which additionally immunostimulating action and tumor activity was observed (loc. cit., F..

SUMM Although a large number of products are known for all sorts of **cosmetic** and medicinal intended uses, there is a constant need for novel improved products. Products are in particular desirable which, on application to the **skin**, produce a pleasant feel and impart a smooth, soft impression.

SUMM Products of this type are advantageous for application in the case of sensitive **skin** and are especially also suitable for the production of medicinal preparations for topical application.

SUMM Preparations for topical application are understood within the meaning of the invention very generally as meaning **cosmetic** compositions, i.e. bodycare compositions and decorative cosmetics. According to the invention, the term also includes human and veterinary medicinal preparations. . .

SUMM The proportion of particularly small particles having a mean diameter of 1 nm to 2 µm can be increased by adding hot-water-soluble poly-alpha-D-glucan to the precipitating agent.

SUMM Examples of ingredients of this type such as can in particular also be used for **cosmetic** compositions are emulsifiers, oils, waxes, fats or other customary constituents of a **cosmetic** formulation such as alcohols, polyols, polymers, foam stabilizers, electrolytes, oils, volatile hydrocarbons, silicone oils or silicone derivatives, active compounds, moisturizers,. . . Fachverband der chemischen Industrie Österreichs, Berufsgruppe Körperpflegemittel, Frankfurt am Main/Vienna, June 1998, contains an index of possible permitted ingredients for **cosmetic** compositions, as can in principle also be used for the present invention.

SUMM To differentiate between **cosmetic** and medicinal use and the corresponding products, reference is made to the regulations in force in Germany, such as are. . .

SUMM . . . is understood the medicinal preparations can contain the same ingredients as have been mentioned above by way of example for **cosmetic** use, provided they are permitted for medicinal purposes.

SUMM . . . invention are also particularly highly suitable as a carrier material for ingredients to be added to the preparations. For example, **cosmetic** and/or medicinal active compounds can be adsorbed on the

## STN Columbus

microparticles or be present encapsulated in these.

SUMM . . . microparticles used according to the invention to topical preparations lead to an increase in the feel of softness on the **skin**.

SUMM The reason for this soft, smooth sensory feel on the **skin** is presumed to be in the regular spherical shape of the microparticles, which brings about a rolling effect, similarly to a ball-bearing. They are therefore in particular also suitable as fillers for specific **cosmetic** effects, if, for example, a particularly soft, smooth powdery effect is to be achieved, in addition they impart to the **skin** a soft matt appearance similar to the soft focus effect in photography.

SUMM . . . to many pigments such as nonmicronized titanium dioxide, the microparticles employed according to the invention do not whiten on the **skin**, i.e. they act as transparent and can therefore advantageously replace pigments of this type.

SUMM . . . particularly highly suitable also as an additive in deodorants, body powders such as body talc, for the absorption of excess **skin** fat, e.g. in anti-oil or antiacne products.

SUMM It was further observed that they are able to reduce **skin** roughness, by and large have a soothing effect on the **skin**, and exert an emollient and moisturizing action.

SUMM In addition to the **cosmetic** effects, the microparticles employed according to the invention are outstandingly dispersible and form stable dispersions or suspensions even without addition. . . .

SUMM A good dispersibility is advantageous, since the addition of dispersing aids and the like can be dispensed with and particularly **skin**-compatible preparations can be obtained, which are moreover simpler and therefore cheaper to prepare.

DETD The addition of microparticles led to no whitening on the **skin**.

CLM What is claimed is:

11. The topical preparation as claimed in claim 1, wherein the topical preparation is a **cosmetic** composition.

12. The topical composition as claimed in claim 1, wherein the **cosmetic** composition is a bodycare composition or a decorative **cosmetic**.

13. The topical preparation as claimed in claim 12, wherein the topical preparation is a decorative **cosmetic** selected from creams, powder and foundations for make-up.

L24 ANSWER 3 OF 7 USPATFULL on STN

### Full Text

ACCESSION NUMBER: 2002:258906 USPATFULL

TITLE: Method for dry-weight basis quantitative analysis of carbohydrates utilizing proton NMR

INVENTOR(S): Lowman, Douglas Wayne, Telford, TN, UNITED STATES

	NUMBER	KIND	DATE
	-----	-----	-----
PATENT INFORMATION:	US 2002142476	A1	20021003
APPLICATION INFO.:	US 2001-782761	A1	20010213 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Mark L. Davis, P.O. Box 9293, Gray, TN, 37615-9293		
NUMBER OF CLAIMS:	15		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Page(s)		
LINE COUNT:	535		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . and sugars and derivatives thereof are finding use in the production of natural food supplements as well as pharmacological and dermatological medicants.

# STN Columbus

DETD [0032] A **glucan** product suitable for use in the present invention can have average **particle** size preferably of from about 1.0 microns or less, and more preferably of from about 0.20 microns or less. To obtain the **particle** size, the mixture containing the (1→3)-β-D-**glucan** may be ground down using a blender or ball mill, for example. One preferred grinding or **particle** size reduction method utilizes a blender having blunt blades, wherein the **glucan** mixture is blended for a sufficient amount of time, preferably several minutes, to completely grind the particles to the desired size without overheating the mixture. Another preferred grinding method comprises grinding the **glucan** mixture in a ball mill with 10 mm stainless steel grinding balls. This latter grinding method is particularly preferred when a **particle** size of about 0.20 microns or less is desired. Desirably, the **water-soluble glucan** has a molecular weight of between about 1,000 Daltons to about 100,000 Daltons with about 1000 to 30,000 Daltons being.

L24 ANSWER 4 OF 7 IFIPAT COPYRIGHT 2004 IFI on STN

## Full Text

AN 03269654 IFIPAT;IFIUDB;IFICDB  
 TITLE: HIGH EFFICIENCY **SKIN** PROTECTION FORMULATION WITH SUNSCREEN AGENTS AND ANTIOXIDANTS; SUNSCREEN AGENTS FOR SKINS AND EMULSIFIERS  
 INVENTOR(S): Greene; James A., Sunnyvale, CA  
 Roberts; Richard L., Germantown, TN  
 Siddiqui; Mukhtar, San Ramon, CA  
 PATENT ASSIGNEE(S): Shaklee Corporation, San Francisco, CA  
 PRIMARY EXAMINER: Dodson, Shelley A  
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PATENT INFORMATION:	US 6015548	A	20000118
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MICROFILM REEL NO:	009326	FRAME NO:	0081
NUMBER OF CLAIMS:	23		

TI HIGH EFFICIENCY **SKIN** PROTECTION FORMULATION WITH SUNSCREEN AGENTS AND ANTIOXIDANTS; SUNSCREEN AGENTS FOR SKINS AND EMULSIFIERS  
 AB A synergistic combination of one or more antioxidants and sunscreen agents provides superior protection of the **skin** against the harmful effects of ultraviolet radiation. In particular embodiments, the antioxidants include lipid soluble vitamins and water soluble antioxidants. . . TEA salicylate, octocrylene or titanium dioxide. The antioxidants and sunscreen agents in combination provide enhanced protection from ultraviolet radiation induced **skin** damage.  
 ECLM 1. A topical composition for protecting **skin** against adverse effects of ultraviolet radiation, comprising: a mixture of antioxidants that includes lipid soluble and water soluble components, wherein. . .  
 ACLM 11. A method of improving an SPF value of a formulation for protecting **skin** from harmful effects of ultraviolet radiation, comprising combining one or more lipid soluble antioxidants with one or more water soluble.

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12. A method of protecting **skin** from the effects of ultraviolet radiation, comprising applying a mixture of one or more sunscreen agents and a mixture of lipid soluble and water soluble antioxidants to the **skin** prior to exposure to ultraviolet radiation, wherein the water soluble antioxidants comprise at least beta-glucan and grape seed extract, and. . .

. . . composition, comprising about 0.0002-4% of a lipid soluble component that includes Vitamin A and Vitamin E; about 0.004-5% of a **water soluble** component that includes Vitamin C, beta-glucan, grape seed extract, and superoxide dismutase; an emulsifier; and a sunscreen component that contains less than about 12% of a non-particulate sunscreen agent that is substantially free of metal oxides.

. . . mixture comprises about 0.0002-4% of the lipid soluble antioxidants that include Vitamin A and Vitamin E; about 0.004-5% of the **water soluble** antioxidants that include Vitamin C, beta-glucan, grape seed extract, and superoxide dismutase; and the sunscreen agent containing less than about 12% of a non-particulate sunscreen agent that is substantially free of metal oxides.

L24 ANSWER 5 OF 7 USPATFULL on STN

### Full Text

ACCESSION NUMBER: 2000:150301 USPATFULL  
 TITLE: Water-soluble low molecular weight beta-glucans for modulating immunological responses in mammalian system  
 INVENTOR(S): Lehmann, Joachim, Scottsdale, AZ, United States  
 Kunze, Rudolf, Berlin, Germany, Federal Republic of  
 PATENT ASSIGNEE(S): Marlyn Nutraceuticals, Inc., Scottsdale, AZ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6143883		20001107
APPLICATION INFO.:	US 1998-224145		19981231 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Wilson, James O.		
LEGAL REPRESENTATIVE:	Lorusso Loud		
NUMBER OF CLAIMS:	6		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	428		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD The fractionated beta-glucan in the present invention may be taken orally or parenterally to induce the expression of beneficial cytokines in mammalian systems. It is believed that the low molecular weight, fractionated beta-glucan, being **water-soluble**, is more quickly and efficiently absorbed in the gastrointestinal tract and, consequently, is more beneficial as an immune-modulator as compared to the unfractionated large molecular weight and/or small **particle** sized native beta-glucan, as illustrated in FIG. 3. The preferred molecular weight to enhance absorption and to induce the expression of beneficial cytokines. . . as immune-modulators is less than approximately 30,000 Daltons, and more preferably between 1,000 Daltons and 30,000 Daltons. Preferred amounts of beta-glucan for nutritional purposes to stimulate the immune system and to induce the expression of beneficial cytokines orally is approximately between. . .

DETD In topical applications, it is believed that fractionated, low molecular weight, water-soluble glucan is more efficacious as a **dermatological** agent. It is also believed that low molecular weight also plays a role in allowing the glucan to remain suspended. . .

L24 ANSWER 6 OF 7 USPATFULL on STN

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## Full Text

ACCESSION NUMBER: 78:7219 USPATFULL  
 TITLE: Compound water-insoluble glucan and process for the production thereof  
 INVENTOR(S): Yokobayashi, Koji, Okayama, Japan  
 Ikeda, Tadashi, Tokyo, Japan  
 Misaki, Akira, Hyogo, Japan  
 PATENT ASSIGNEE(S): Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Okayama, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4072567		19780207
APPLICATION INFO.:	US 1976-749520		19761210 (5)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1975-147854	19751211
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Jones, Raymond N.	
ASSISTANT EXAMINER:	Wiseman, Thomas G.	
LEGAL REPRESENTATIVE:	Browdy and Neimark	
NUMBER OF CLAIMS:	3	
EXEMPLARY CLAIM:	1,2,3	
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	378	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM Polysaccharides have been used extensively in the food, **cosmetic**, pharmaceutical, paper manufacturing and chemical industries, and the consumption is showing a yearly increase. Although higher plants and sea weeds. . .

DETD White **powder** product is obtainable by drying the **glucan** intact or after purification. Since the product is water-insoluble, the characteristics of the product can be utilized for many applications. For example, the water-insoluble **glucan** can be used for preparing feeds for fish culture, which is difficultly **water-soluble** and which prevent contamination or pollution of the fish-breeding ponds.

L24 ANSWER 7 OF 7 KOSMET COPYRIGHT 2004 IFSCC on STN

## Full Text

ACCESSION NUMBER: 28625 KOSMET  
 FILE SEGMENT: scientific, technical  
 TITLE: NEW ANTI-AGING MOISTURIZER INGREDIENTS OF EXOPOLYSACCHARIDES BY GRIFOLA FRONDOSA  
 AUTHOR: BAE JT (BAE JT (1), LEE BC (1), YOON EJ (1), KIM JH (1), LEE DH (1), PYO HB (1), CHOE TB (2)=R D CENTER, HANBUL COSMETICS CO., CHUNGBUK 369-830, KOREA (1), DEPARTMENT OF MICROBIAL ENGINEERING, KONKUK UNIVERSITY, SEOUL 143-701, KOREA (2)); LEE BC; YOON EJ; KIM JH; LEE DH; PYO HB; CHOE TB  
 SOURCE: IFSCC CONFERENCE 2003, SEOUL, KOREA, SEPTEMBER 22-24, 2003, COEX CONVENTION CENTRE, SEOUL, CONFERENCE THEME: COSMETICS - WHERE SCIENCE MEETS DREAM, PROCEEDINGS BOOK 1 OF 2, PAPER 3, 35-50, 22 REFS  
 Meeting Organizer: SOCIETY OF COSMETIC SCIENTISTS OF KOREA (SCSK), 314-1, BORA-RI, KIHEUNG-EUP, YONGIN-SI KYUNGGI-DO 449-729, KOREA, TEL: +82-31-280 57 01, FAX: +82-31-285 03 24, EMAIL: [Changkim@pacific.co.kr](mailto:Changkim@pacific.co.kr), INTERNET: [www.scsk.or.kr](http://www.scsk.or.kr); IFSCC / SOCIETY OF COSMETIC SCIENTISTS, GT HOUSE, 24-26 ROTHESAY ROAD, LUTON, BEDS LU1 1QX, UNITED KINGDOM, TEL: +44-1582-726661, FAX:

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LANGUAGE:

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AB In this study, in an attempt to search for functional **cosmetic** ingredients from higher fungal, we have produced exopolysaccharides (GF-1, approximately carbohydrate 75%, protein 25%) and polysaccharide (GF-2) of mycelium extract, by submerged culture of *Grifola frondosa*. For applications in anti-aging **cosmetic** field, we investigated the diverse biological activities. Antioxidant activity and inhibition of Matrixmetalloproteinases (MMPs) were investigated enzymatic assays by measuring. . . about 50% at 0.5% (w/v) compared to that of untreated control. We also report the moisturizing effects of polysaccharides in **cosmetic** products (O/W emulsion) and its own ingredient, in vitro and in vivo. The GF-1 polysaccharide showed higher moisturizing ability than. . . of their various biological and pharmacological activities. Recent studies are carried out searching for new active agents to benefit the **skin** health and beauty industries. *Grifola frondosa* is a Basidiomycete fungus belonging to the order Aphyllopherales, and family Polyporaceae. Fruit body. . . fractions. These polysaccharides have been identified as many types of glucans (e.g. beta-1,6- and beta-1,3-). Wide varieties of applications of beta-glucan have been reported, including thickening and stabilizing agents in chemical industries, and immunostimulating and antitumor agents in clinical uses [4]. Apart from these applications, beta-glucan has been used as a substance that enhances the **skin's** natural ability to heal and protect itself against infection. beta-glucan now in use as a component of various cosmetics is mainly produced from *Saccharomyces cerevisiae* as a **water-soluble particulate** or its chemically modified soluble forms such as carboxymethyl or phospholyated **glucan**. Another beta-glucan, schizophyllan, which is produced from *Schizophyllum commune*, has been regarded as a good candidate for blocking the **skin** aging process. Several different kinds of polysaccharides have been produced from liquid culture of mushrooms and their diverse physiological activities. . . [14,15]. Recently, several polysaccharides have been used as alternative ingredients for enhancing collagen biosynthesis and increasing cell proliferation in the **skin** cells. Therefore, polysaccharides induce the production of extracellular matrix (ECM) such as collagen. The extracellular matrix (ECM) serves not only. . . degradation is one of the important factors of wrinkle formation. In this study, in an attempt to search for functional **cosmetic** ingredients from mushrooms, we have produced exopolysaccharides (GF-1) and polysaccharide (GF-2) of mycelium extract by submerged culture of *G. frondosa*. . . proliferation of the fibroblasts, and collagen biosynthesis activity. Also, we have measured the moisturizing effects of polysaccharides to improve the **skin** condition. To the best of our knowledge, this is the first report on the wide application of polysaccharides produced from. . . new moisturizing and anti-aging cosmeceuticals. In conclusion, we confirmed that the GF-1 polysaccharide of fermentation broth was predominant ingredient for **cosmetic** applications compared to GF-2 polysaccharide of mycelium extract by submerged culture of *G. frondosa*. These results suggest the GF-1 polysaccharide may be used as ingredients for new moisturizing, anti-aging **cosmetic** and other biological applications.

SH **SKIN; RAW MATERIALS**

CT **GRIFOLA FRONDOSA; NATURAL COMPOUNDS; FUNGI; POLYSACCHARIDES; POLYSACCHARIDES DERIVATIVES; ANTIAGING AGENTS; MOISTURIZERS; ANTIWRINKLE AGENTS; SKIN CARE; RESEARCH AND DEVELOPMENT; CREATIVITY; COMPANIES; HABUL; KOREA; IFSCC; CONFERENCES**

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